



# **STOCKPILE REPORT**

## **to the Congress**



**JANUARY - JUNE 1962**

**EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF EMERGENCY PLANNING  
WASHINGTON 25, D. C.**



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OFFICE OF EMERGENCY PLANNING  
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OFFICE OF THE DIRECTOR

December 31, 1962

The Honorable Lyndon B. Johnson  
The President of the Senate

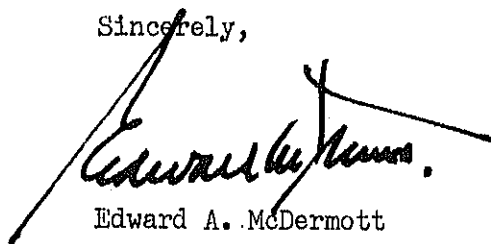
The Honorable John W. McCormack  
The Speaker of the House of Representatives

Sirs:

There is presented herewith the semiannual report to the Congress on the strategic and critical materials stockpiling program for the period January 1 to June 30, 1962. A statistical supplement to this report was transmitted to you earlier.

This report is submitted pursuant to Section 4 of the Strategic and Critical Materials Stock Piling Act, Public Law 520, 79th Congress.

Sincerely,

A handwritten signature in dark ink, appearing to read "Edward A. McDermott", is written over a large, stylized, handwritten "X" or checkmark. The signature is written in a cursive, somewhat slanted style.

Edward A. McDermott



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## Summary

The Executive Stockpile Committee appointed by President Kennedy is reviewing all policies and programs involving strategic and critical materials. The Committee has already made several recommendations to the President. The declassification of stockpile objectives and inventories, amendment of the policy dealing with disposals, and a report on the barter program have stemmed from the Committee's activities. The Report on the Barter Program and the amended Defense Mobilization Order V-7, revised and amended, are included in this Report.

Supply-requirements studies are under way to measure the requirements for conventional war and the development of a system for measuring the impact of nuclear war on the national economy. The latter study involves the use of computer data indicating the probable postattack availability of and need for resources.

The market value of all inventories of strategic materials on June 30, 1962 was \$7.6 billion. Inventories within objectives were \$4.3 billion, leaving an excess of about \$3.3 billion.

Barter contracts (25) involving about \$67.6 million of strategic materials were made in this reporting period. Cumulative deliveries of strategic materials under the barter program amount to \$1.4 billion.

January-June 1962 procurement included jewel bearings from the Government's Rolla, North Dakota plant, and commercial upgrading of columbite, tantalite, copper, and vanadium.

Contract reductions were made in the amounts of \$2 million Defense Production Act (DPA) and \$1 million Strategic and Critical Materials (SCM). Since the beginning of fiscal year 1958, reductions in DPA contracts total \$351 million and \$59 million in SCM; total \$410 million.

Sales commitments under active disposal plans by the General Services Administration, cumulative to June 30, 1962, including \$174.5 million for sales of Nicaraguan nickel, total about \$439 million.

*In the last six months, sales amounting to \$39,330,645 have brought about reductions in three Government-owned materials inventories. An additional reduction of \$126,800,355 has resulted from changes in market prices of commodities held in the inventories. The Strategic Stockpile has been reduced from \$5,729,553,200 to \$5,586,683,400, and the Defense Production Act inventories have dropped from \$920,768,200 to \$900,735,300. The tin inventory held by the Federal Facilities Corporation and valued at \$3,228,300 has been completely sold.*

*The valuation of the Supplemental Stockpile increased \$73,980,500 in this same period, from \$961,920,900 to \$1,035,901,400. However, new acquisitions in this stockpile did not require any cash outlay by the U.S. Government. Perishable agricultural commodities were bartered for materials which will not deteriorate, and all costs of the transactions, including transportation, were covered by the surplus agricultural commodities. Substantial savings in high cost storage charges were effected also by these transactions. The agricultural commodities, generally subject to deterioration, which were exchanged for strategic materials during the January-June 1962 period would ordinarily incur a storage cost of \$5.5 million per year. The non-deteriorating strategic materials for which they were exchanged will be stored for \$108,000 per annum, a reduction of 98 percent.*

## Introduction

The first six months of 1962 have been a period of searching inquiries into past policies, methods, and procedures of the National Stockpile (sometimes called the Strategic Stockpile) by both the Executive and Legislative Branches of the Government.

### EXECUTIVE BRANCH REVIEW

On February 7, 1962, the President ordered the establishment of an Executive Stockpile Committee under the chairmanship of the Director of the Office of Emergency Planning consisting of the Secretaries of State, Defense, the Interior, Commerce, and Labor, the Director of the Central Intelligence Agency, and the Administrator of General Services. The Committee was directed to review the principles and policies which should guide the program for the stockpiling of strategic materials and its relationship to the nation's defense strategy.

The scope of the Committee's examination is extensive and, in due time, may be expected to cover the major elements of stockpile policy and programming including, but not necessarily limited to, such considerations as planning assumptions about the types of emergencies for which material shortages might arise; the impact of cold war, limited war and nuclear war, including rehabilitation and reconstruction on the supply of and demand for strategic materials; revision of stockpile legislation; disposals of surplus materials; management of and exchanges among the three stockpiles (National, Defense Production Act, and Supplemental) and the Commodity Credit Corporation inventory; upgrading; and rotation.

The Executive Committee's studies were still in progress at the close of the period covered by this report. However, the President has received and approved, in part, Committee recommendations on the Barter Program. The Department of Agriculture press release of September 28, 1962, entitled "Report on the Barter Program submitted to the President by the Executive Stockpile Committee" is included in this Report, page 20.

### LEGISLATIVE INQUIRY

The National Stockpile and Naval Petroleum Reserve Subcommittee of the Committee on Armed Services, United States Senate, chaired by Senator Stuart Symington, began hearings on March 28, 1962. The testimony of these hearings, which have not been completed as this Report goes to press, is being published in a number of volumes entitled "Inquiry into the Strategic and Critical Material Stockpiles of the United States."

### POLICY REVISIONS

Two major revisions of stockpile policy occurred during this reporting period:

#### 1. Declassification of Stockpile Data

The security classification on stockpile materials objectives and the quantities in all inventories was removed by the Director of the Office of Emergency Planning in March 1962. Notice of declassification was published in the Federal Register of April 11, 1962.

*New stockpile objectives which will be determined from supply-requirements studies now under way will be classified whenever it becomes necessary to protect national security information.*

#### 2. Policy Regarding Disposal of Excess Government Inventories

On April 25, 1962, the Director of the Office of Emergency Planning issued an amendment to Defense Mobilization Order V-7, General Policies for Strategic and Critical Materials Stockpiling. The amendment of Section 14, Disposals, eliminates the implicit veto power of other agencies in disposal. The various interested agencies are still consulted, however, and any objections of the Department of State and the Department of the Interior which, after discussion, the Director of OEP does not support shall be presented to the President for decision. The amendment also adds the clause "avoidance of adverse effects upon domestic employment and labor disputes." The full text of the amended DMO V-7 is on pages 22 and 23.

### SUPPLY-REQUIREMENTS STUDIES

During the latter half of fiscal year 1962, the President issued Executive Orders assigning emergency preparedness responsibilities to nine agencies. Subsequent to the end of the fiscal year, further Executive Orders were issued. The Orders, among other things, define the supply and requirements functions of the various agencies.

Consistent with these Executive Orders, the Director of the Office of Emergency Planning initiated the development by all pertinent Federal agencies of broad supply-requirements studies under conditions of conventional and nuclear war. To conduct these supply-requirements studies, he established on July 18, 1962 an interagency committee consisting of representatives from 18 Government agencies. Both the conventional and nuclear war studies being conducted are scheduled for early completion.



Included in these studies are complete reviews of all stockpile objectives. Reviews of the aluminum, copper, and nickel objectives for conventional war are scheduled for completion by the end of December 1962. The other 73 objectives will be reviewed during calendar year 1963.

The nuclear war study involving attack on the United States will be based on the joint OEP-DoD vulnerability study "Nuclear Attack Hazard in Continental U.S. 1963" (NAHICUS '63). This is a study made by the National Resources Evaluation Center employing the Risk II computer model to generate estimates of population casualties and facilities and the damage and denial effects on our vital resources. The general assumptions and guidance for this study will include a period of survival followed by a period of rehabilitation, reconstruction, and recovery.

It is not known yet whether the data developed in the nuclear war study will be sufficiently accurate to be used to determine stockpile objectives, as the study was designed to provide only a "rough-cut" minimum detail view of the best estimates of war-time supply and demand quickly derivable from current official sources.

If the study proves to be usable, reviews of stockpile objectives will follow the same schedule as that established for conventional war. Otherwise, a program will be initiated in 1963 to refine procedures and methods so that a determination of stockpile objectives may be made at the earliest date possible.

## MANAGEMENT

### Specifications and Special Instructions

Six purchase specifications and two special purchase and acceptance instructions were approved and issued during this reporting period. Two of the purchase specifications, prescribing stockpile qualities for capacitor grade tantalum and commercial grade columbium, are new issues. Revisions were made in existing purchase specifications for antimony, amosite asbestos, abaca and sisal. The revised special instructions apply to amosite asbestos and cordage fibers.

### Transfer of Stockpile Storage Functions

Responsibilities for the development of policies, plans, and programs for the storage, security, and maintenance of stockpiled materials, which were transferred to the General Services Administration on December 6, 1961, were reassumed by the Office of Emergency Planning on July 17, 1962.

### Agency Activities

Although this Report to the Congress is primarily concerned with activities of stockpiling and the conservation and development of sources of strategic and critical materials under the provisions of the Strategic and Critical Materials Stock Piling Act, associated activities and data covering the Defense Production Act and the Supplemental Stockpile Programs are included for completeness.

Appropriately dated references are made herein to activities in process during the reporting period and completed before this report was printed.

# Summary of Government Inventories of Strategic and Critical Materials

June 30, 1962

(Dollar values based on June 30, 1962, market prices)

Total of Maximum Objectives for Strategic Stockpile:  
\$4,298,994,500

|  | <i>Market Value*</i>    |
|--|-------------------------|
| <u>I. Total Inventories</u>                                  | <u>\$ 7,617,896,400</u> |
| Strategic Stockpile.....                                     | 5,586,683,400           |
| Defense Production Act.....                                  | 900,735,300             |
| Commodity Credit Corp.....                                   | 94,576,300              |
| Supplemental Stockpile .....                                 | 1,035,901,400           |
| <u>II. Inventories Within Strategic Stockpile Objectives</u> | <u>4,266,039,700</u>    |
| Strategic Stockpile.....                                     | 3,909,880,200           |
| Defense Production Act.....                                  | 145,945,100             |
| Commodity Credit Corp.....                                   | 47,345,300              |
| Supplemental Stockpile .....                                 | 162,869,100             |
| <u>III. Inventories Excess to Strategic Stockpile Needs</u>  | <u>3,351,856,700</u>    |
| <u>Specification Grades of Materials With Objectives</u>     | <u>3,052,759,400</u>    |
| Strategic Stockpile .....                                    | 1,527,259,900           |
| Defense Production Act .....                                 | 627,736,900             |
| Commodity Credit Corp .....                                  | 41,385,500              |
| Supplemental Stockpile.....                                  | 856,377,100             |
| <u>Nonspecification Grades of Materials With Objectives</u>  | <u>155,730,400</u>      |
| Strategic Stockpile .....                                    | 56,578,400              |
| Defense Production Act.....                                  | 96,293,400              |
| Commodity Credit Corp .....                                  | 0                       |
| Supplemental Stockpile.....                                  | 2,858,600               |
| <u>Materials Without Objectives</u>                          | <u>143,366,900</u>      |
| Strategic Stockpile .....                                    | 92,964,900              |
| Defense Production Act.....                                  | 30,759,900              |
| Commodity Credit Corp .....                                  | 5,845,500               |
| Supplemental Stockpile.....                                  | 13,796,600              |

\*Market values are computed from prices at which similar materials are being traded currently; or, in the absence of current trading, an estimate of the price which would prevail in commercial markets. The values are generally unadjusted for normal premiums and discounts relating to contained qualities. The value does not necessarily reflect the amount that would be realized at time of sale.

Source: General Services Administration.

## Status of Strategic Stockpile Inventories

### ACHIEVEMENT OF STOCKPILE OBJECTIVES

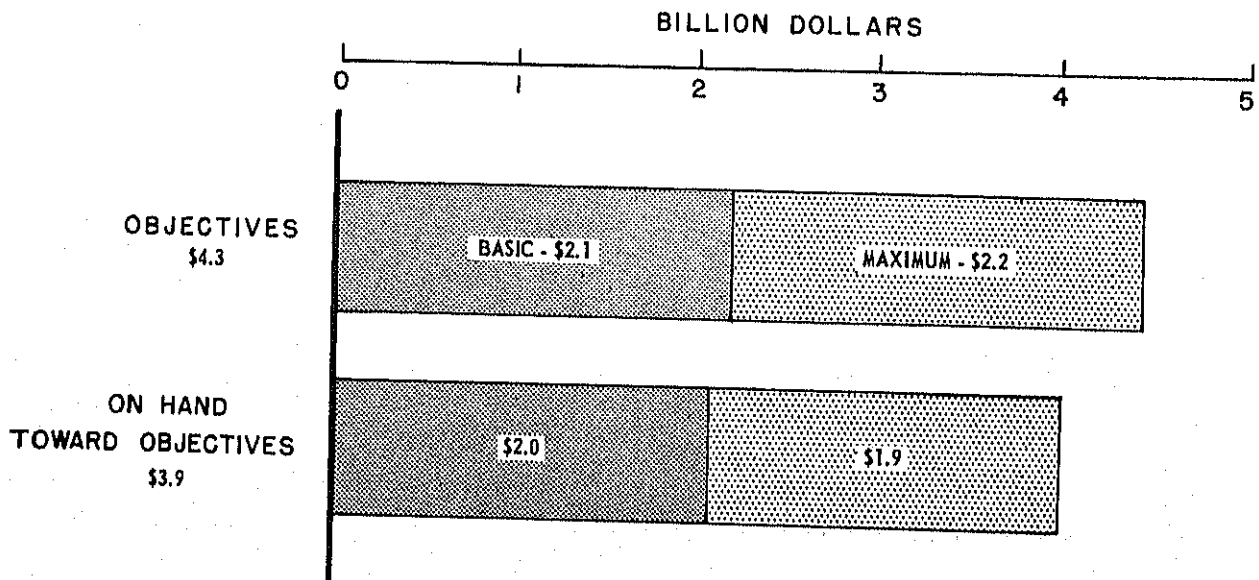
On June 30, 1962, national stockpile inventories of the 76 materials for which there are official stockpile objectives equaled or exceeded the maximum objectives for 52 materials and the basic objectives for 62 materials. Basic objectives assume partial dependence during an emergency on areas beyond North America, and maximum objectives provide a higher degree of security by completely discounting emergency supply from distant overseas sources.

Quantities of materials in other government-owned inventories, if transferred to the national stockpile, would increase to 65 the number of maximum objectives and to 69 the number of basic objectives met by total quantities on hand as of June 30, 1962. Quantities on order for all inventories would complete three additional maximum objectives and two additional basic objectives.

Even under these conditions, the stockpile objectives as now computed are keyed primarily to limited-war conditions, when most domestic productive capacity would probably be available, but foreign sources of supply might be interrupted. Total present maximum stockpile objectives would be expected to meet less than one-third of the total requirements. The proportion of stockpile supply to total war requirements would vary from less than five percent for materials available from relatively dependable domestic and nearby foreign sources to one hundred percent for materials that would not be available in an emergency from those sources.

The emergence of missile and nuclear warfare techniques has become an increasingly important consideration in strategic materials planning, requiring increased attention to the state of readiness to supply needed materials in the event of an emergency, including attention to the vulnerability,

**Fig.1 — STRATEGIC STOCKPILE INVENTORIES  
AS OF JUNE 30, 1962**



or probable availability, of domestic-producing facilities and of stockpiles.

The extent of stockpile objectives and inventories on hand to meet these objectives are indicated in Figure 1. Stockpile objectives call for materials valued at \$4.3 billion, of which \$2.1 billion is applicable to basic objectives and \$2.2 billion is applicable to maximum objectives. Total specification-grade inventories of materials in the strategic stockpile are valued at \$5.4 billion on the basis of June 30, 1962 market prices. Excess quantities in the stockpile of specification-grade inventories for some of the materials, representing quantities acquired generally against previously higher objectives, are now valued at \$1.5 billion. The remaining inventories of \$3.9 billion are applicable to stockpile objectives. Of this amount, \$2.0 billion is applicable to the basic objectives and \$1.9 billion is applicable to the maximum objectives.

The List of Strategic and Critical Materials for Stockpiling follows. Achievement of stockpile objectives is shown in this table only if the materials are actually in the strategic stockpile. Footnotes indicate when other government inventories, if combined with strategic stockpile quantities, would complete the stockpile objectives. Also footnoted are those materials for which upgrading objectives in effect as of June 30, 1962, had not been achieved.

*List of Strategic and Critical Materials  
for Stockpiling (for the Strategic Stockpile)*

June 30, 1962

| Materials                                  | Inventory equals or exceeds (X) |                    |
|--|---------------------------------|--------------------|
|  | Basic objective                 | Maximum objective  |
| Total.....                                 | 62                              | 62                 |
| 1. Aluminum.....                           | x                               | ( <sup>1</sup> )   |
| 2. Aluminum Oxide, Fused, Crude.....       | x                               | x                  |
| 3. Antimony.....                           | ( <sup>1</sup> )                |                    |
| 4. Asbestos, Amosite.....                  | ( <sup>2</sup> )                | ( <sup>2</sup> )   |
| 5. Asbestos, Chrysotile....                |                                 |                    |
| 6. Bauxite, Metal Grade, Jamaica Type..... | ( <sup>1</sup> )                | ( <sup>1</sup> )   |
| 7. Bauxite, Metal Grade, Surinam Type..... | x                               | ( <sup>1</sup> )   |
| 8. Bauxite, Refractory Grade.....          | x                               | x                  |
| 9. Beryl.....                              | x                               | x                  |
| 10. Bismuth.....                           | ( <sup>1</sup> )                | ( <sup>1</sup> )   |
| 11. Cadmium.....                           | x                               | x                  |
| 12. Castor Oil.....                        | x                               | ( <sup>3</sup> ) x |
| 13. Celestite.....                         |                                 |                    |
| 14. Chromite, Chemical Grade.....          | x                               | x                  |
| 15. Chromite, Metallurgical Grade.....     | x                               | x                  |
| 16. Chromite, Refractory Grade.....        | x                               | ( <sup>2</sup> )   |
| 17. Cobalt.....                            | x                               | x                  |

| Materials   | Inventory equals or exceeds (X) |                                   |
|---|---------------------------------|-----------------------------------|
|   | Basic objective                 | Maximum objective                 |
| 18. Columbium.....  | x                               | ( <sup>3</sup> ) x                |
| 19. Copper.....   | x                               | ( <sup>3</sup> ) x                |
| 20. Cordage Fibers, Abaca...  | x                               | x                                 |
| 21. Cordage Fibers, Sisal...  | x                               | x                                 |
| 22. Corundum.....   | x                               | x                                 |
| 23. Diamond Dies, Small.....  | ( <sup>2</sup> )                | ( <sup>2</sup> )                  |
| 24. Diamond, Industrial: Crushing Bort.....                             | x                               | x                                 |
| 25. Diamond, Industrial: Stones.....                                    | x                               | ( <sup>1</sup> )                  |
| 26. Feathers and Down, Waterfowl.....                                   | x                               | x                                 |
| 27. Fluorspar, Acid Grade...  | x                               | x                                 |
| 28. Fluorspar, Metallurgical Grade.....                                 | x                               | x                                 |
| 29. Graphite, Natural--Ceylon, Amorphous Lump.                          | x                               | x                                 |
| 30. Graphite, Natural--Madagascar, Crystalline...                       | x                               | x                                 |
| 31. Graphite, Natural--Other than Ceylon and Madagascar, Crystalline... | x                               | x                                 |
| 32. Hyoscine.....   | x                               | x                                 |
| 33. Iodine.....   | x                               |                                   |
| 34. Jewel Bearings.....   |                                 |                                   |
| 35. Kyanite-Mullite.....  | x                               | x                                 |
| 36. Lead.....   | x                               | x                                 |
| 37. Magnesium.....  | x                               | x                                 |
| 38. Manganese, Battery Grade, Natural Ore.....                          | x                               | x                                 |
| 39. Manganese, Battery Grade, Synthetic Dioxide.....                    | x                               | x                                 |
| 40. Manganese, Chemical Grade, Type A Ore.....                          | x                               | x                                 |
| 41. Manganese, Chemical Grade, Type B Ore.....                          | ( <sup>1</sup> )                | ( <sup>1</sup> )                  |
| 42. Manganese, Metallurgical Grade.....                                 | x                               | ( <sup>1</sup> ) ( <sup>3</sup> ) |
| 43. Mercury.....  | x                               | x                                 |
| 44. Mica, Muscovite Block, Stained A/B and Better                       | x                               | ( <sup>1</sup> )                  |
| 45. Mica, Muscovite Film, First and Second Qualities.....               | x                               | ( <sup>1</sup> )                  |
| 46. Mica, Muscovite Splittings.....                                     | x                               | x                                 |
| 47. Mica, Phlogopite Block..  | x                               | x                                 |
| 48. Mica, Phlogopite Splittings.....                                    | x                               | x                                 |
| 49. Molybdenum.....   | x                               | ( <sup>3</sup> ) x                |
| 50. Nickel.....   | x                               | x                                 |
| 51. Opium.....  | x                               | x                                 |
| 52. Platinum Group Metals, Iridium.....                                 | x                               | x                                 |
| 53. Platinum Group Metals, Palladium.....                               | ( <sup>1</sup> )                | ( <sup>1</sup> )                  |
| 54. Platinum Group Metals, Platinum.....                                | x                               | x                                 |
| 55. Pyrethrum.....  | x                               | x                                 |
| 56. Quartz Crystals.....  | x                               | x                                 |
| 57. Quinidine.....  | x                               | x                                 |
| 58. Rare Earths.....  | x                               | x                                 |
| 59. Rubber, Crude Natural...  | x                               | x                                 |

| Materials                                    | Inventory equals or exceeds (X) |                                   |
|--|---------------------------------|-----------------------------------|
|  | Basic objective                 | Maximum objective                 |
| 60. Rutile.....                              | x                               | ( <sup>1</sup> )                  |
| 61. Sapphire and Ruby.....                   | ( <sup>1</sup> )                |                                   |
| 62. Selenium.....                            | x                               | x                                 |
| 63. Shellac.....                             | ( <sup>1</sup> )                | ( <sup>1</sup> )                  |
| 64. Silicon Carbide, Crude..                 | x                               | x                                 |
| 65. Silk Nolls.....                          | x                               | x                                 |
| 66. Silk, Raw.....                           | x                               | x                                 |
| 67. Sperm Oil.....                           | x                               | x                                 |
| 68. Talc, Steatite, Block and Lump.....      | x                               | x                                 |
| 69. Tantalum.....                            | x                               | ( <sup>1</sup> ) ( <sup>3</sup> ) |
| 70. Tin.....                                 | x                               | x                                 |
| 71. Tungsten.....                            | x                               | ( <sup>3</sup> ) x                |
| 72. Vanadium.....                            | x                               | x                                 |
| 73. Vegetable Tannin Extract, Chestnut.....  | x                               | x                                 |
| 74. Vegetable Tannin Extract, Quebracho..... | x                               | x                                 |
| 75. Vegetable Tannin Extract, Wattle.....    | x                               | x                                 |
| 76. Zinc.....                                | x                               | x                                 |

<sup>1</sup>Sufficient quantities are on hand in total Government-owned inventories to complete the objective.

<sup>2</sup>Total quantities on hand in and on order for all Government-owned inventories are virtually sufficient to complete the objective.

<sup>3</sup>Although total quantities are equal to the maximum objective, the upgrading program has not been completed.

#### OTHER MATERIALS IN NATIONAL STOCKPILE INVENTORY

In addition to inventories of specification-grade materials, the national stockpile contains (1) non-specification grades of materials for which there are stockpile objectives, and (2) materials that have been removed from the stockpile list and others for which there are no objectives. The amounts of each of these materials on hand as of June 30 are shown in the following tables.

Most of the nonspecification-grade stocks were acquired by transfer of government-owned surplus materials. Some of these were accepted as contract termination inventories after World War II. Others were accepted under stockpile specifications now outmoded for such reasons as changes in industry practice and technological advances; others were taken with a view to processing them to specification grade if this were necessary in order to meet emergency demands. Disposal action for many of these items has been authorized by OEP. Changes in the lists during fiscal year 1962 are due primarily to disposals, removal of excess and off-grade materials, and reclassification and other adjustments of the inventories.

#### Strategic Stockpile Inventories, Materials for Which There Are No Stockpile Objectives

As of June 30, 1962

| Material  | Unit   | Quantity    |
|---|--------|-------------|
| Asbestos, Crocidolite (Soft)...                 | ST     | 1,587       |
| Coconut Oil.....                                | Lb.    | 153,505,675 |
| Cotton, Extra Long Staple.....                  | Bale   | 219,204     |
| Diamond Dies, Other Than Small                  | Pc.    | 355         |
| Diamond Tools.....                              | Pc.    | 64,178      |
| Mica, Muscovite Block, Stained B and Lower..... | Lb.    | 4,621,016   |
| Mica, Muscovite Film, 3d Quality.....           | Lb.    | 513,181     |
| Palm Oil.....                                   | Lb.    | 28,604,089  |
| Platinum Group Metals, Rhodium                  | Tr.Oz. | 621         |
| Quartz, Processed.....                          | Pc.    | 12,100      |
| Quinine.....                                    | Oz.    | 8,183,728   |
| Quinine, Hydrochloride of.....                  | Oz.    | 103         |
| Silk Waste.....                                 | Lb.    | 1,405,013   |
| Talc, Steatite, Ground.....                     | ST     | 3,901       |
| Totaquine.....                                  | Oz.    | 7,654,416   |
| Zirconium Ore, Baddeleyite....                  | SDT    | 16,533      |
| Zirconium Ore, Zircon.....                      | SDT    | 8,843       |

Source of data: General Services Administration.

#### Strategic Stockpile Inventories of Nonspecification Grades of Materials for Which There Are Stockpile Objectives

As of June 30, 1962

| Material  | Unit   | Quantity   |
|---|--------|------------|
| Aluminum.....   | ST     | 1,787      |
| Bismuth.....  | Lb.    | 36,580     |
| Cadmium.....  | Lb.    | 1,088,225  |
| Celestite.....  | SDT    | 28,816     |
| Chromite, Metallurgical Grade..                                       | SDT    | 197        |
| Columbium.....  | Lb.    | 1,382,704  |
| Diamond Dies, Small.....  | Pc.    | 8,371      |
| Fluorspar, Acid Grade.....  | SDT    | 4,960      |
| Graphite, Natural--Madagascar, Crystalline.....                       | ST     | 1,907      |
| Graphite, Natural--Other than Ceylon and Madagascar, Crystalline..... | ST     | 672        |
| Jewel Bearings.....   | Pc.    | 14,715,973 |
| Magnesium.....  | ST     | 2,444      |
| Manganese, Metallurgical Grade  | SDT    | 621,304    |
| Mica, Muscovite Block, Stained A/B and Better.....                    | Lb.    | 347,600    |
| Mica, Muscovite Film, 1st and 2d Qualities.....                       | Lb.    | 23,674     |
| Mica, Phlogopite Block.....   | Lb.    | 206,490    |
| Opium.....  | Lb.    | 2,180      |
| Platinum Group Metals, Platinum.....                                  | Tr.Oz. | 3,344      |
| Quartz Crystals.....  | Lb.    | 880,400    |
| Talc, Steatite, Block and Lump  | ST     | 40         |
| Tantalum.....   | Lb.    | 1,881,618  |
| Tungsten.....   | Lb.    | 16,239,386 |
| Vanadium.....   | Lb.    | 107,771    |

Source of data: General Services Administration.

## Activities Under the Agricultural Trade Development and Assistance Act of 1954, as Amended

### PURCHASE OF STRATEGIC AND CRITICAL MATERIALS

No foreign currency (under Section 104(b)) has been earmarked specifically for the purchase of strategic and critical materials under Title I, Public Law 480 agreements. However, in a number of agreements, provision has been made to utilize foreign currencies for the purchase of strategic and other materials for the supplemental stockpile in the event there is need to do so.

### BARTER PROCUREMENT

Under authority for barter contained in the Commodity Credit Corporation Charter Act, the Agricultural Trade Development and Assistance Act of 1954 and related legislation, as amended, the CCC

negotiated 25 barter contracts for strategic and other materials valued at approximately \$67.6 million during January-June 1962. By comparison, 17 contracts valued at approximately \$44.7 million were negotiated in the July-December 1961 period and 53 contracts valued at approximately \$125.6 million were negotiated during the January-June 1961 period.

Strategic and other materials valued at approximately \$1,415.3 million have been delivered under barter contracts from July 1954 through June 1962, of which materials worth approximately \$74.5 million were delivered during the reporting period. Cumulative transfers to stockpile since July 1954 have totaled approximately \$1,318.2 million (\$151.5 million to the strategic and \$1,166.7 million to the supplemental stockpile). All the above reported amounts include estimated figures for June 1962.

## National Stockpile Activities

### PROCUREMENT

The Strategic Stockpile Procurement Directive for the fiscal year 1962 authorized the continued procurement of jewel bearings from the Rolla, North Dakota plant. During the period, the stockpile contract with the Bulova Watch Company for the purchase of jewel bearings produced at that plant was extended through June 30, 1963, with renewal options for 1964 and 1965.

### UPGRADING

Contracts were executed for the conversion of Government-owned columbium-tantalum concentrates to tantalum and columbium carbide powder, copper to oxygen-free copper, and vanadium concentrates to ferrovandium. Payment for the processing under these upgrading contracts will be made in excess materials from the DPA inventory. Deliveries continue under contracts made prior to fiscal year 1962 for the conversion of molybdenite to ferromolybdenum and for the conversion of tungsten concentrates to carbon-reduced tungsten metal powder.

### REDUCTIONS OF COMMITMENTS

Further reductions were made in contracts previously executed for quantities of materials no longer needed for stockpile objectives. During the

period January through June 1962, two DPA contracts for cobalt and copper were reduced in the amount of \$2,049,000 and one SCM contract for copper was reduced in the amount of \$1,090,000. Since the beginning of fiscal year 1958, reductions in DPA contracts total \$351,271,000, and reductions in SCM contracts amount to \$58,967,000, or a total of \$410,238,000 for all contracts.

### DISPOSAL PROGRAM

During the reporting period, eight disposal plans were concurred in by interested Government agencies. These plans cover aluminum to be used for foreign aid exclusively, fluorspar and rutile briquettes from the Defense Production Act inventory, and magnesium ingots, molybdenum, nickel oxide powder, silk waste and silk noils from the national stockpile. Notices for the five disposal plans covering materials from the national stockpile were published in the Federal Register, and public announcements were made concerning the plans covering the Defense Production Act fluorspar and rutile briquettes during the report period. In addition, public announcement was made concerning the disposal plan for manganese ores at Butte-Phillipsburg acquired under the Defense Production Act. This plan was concurred in by other Government agencies prior to the report period.

Authority to develop draft plans was issued covering 5,330 short tons of nonspecification alu-

minum from the Defense Production Act inventory, 2,237 short tons of nonspecification grade aluminum from the national stockpile, and 12,245 long tons of chestnut tannin extract from the national stockpile.

On June 21, the Congress passed House Concurrent Resolution 473, which provides the express approval of the Congress for 14 proposed disposals of materials from the national stockpile with an acquisition cost of approximately \$177.6 million. Seven of these items, i.e., silk noils, cordage fiber, vegetable tannins, tin, castor oil, nickel oxide powder, and molybdenum, cover quantities in excess of current stockpile objectives. The other disposals cover materials which do not meet stockpile specifications. These are: miscellaneous nickel items, celestite, nonferrous and platinum scrap, cobalt oxides and carbonates, chromite ore, ferrovanadium, ferromanganese, and electrolytic manganese.

#### STORAGE AND MAINTENANCE

On June 30, strategic and critical materials were stored at 208 locations, as follows:

| Type of Facility             | As of<br>6/30/62 | Net change in<br>last 6 months |
|------------------------------|------------------|--------------------------------|
| Military depots.....         | 57               | -1                             |
| GSA depots.....              | 22               | +1                             |
| Other Government-owned sites | 10               | 0                              |
| Industrial plant sites.....  | 39               | 0                              |
| Leased commercial sites..... | 15               | 0                              |
| Commercial warehouses.....   | 65               | -1                             |
| Total.....                   | 208              | -1                             |

Approximately 50 million tons of materials were stored at these facilities on June 30, of which 2.4 million tons were received during January-June. Of the new receipts, 98 percent originated on CCC barter contracts, 1 percent on SCM contracts, and 1 percent on DPA contracts. More than 20 million tons of strategic materials have been received into storage during the past five years, of which 14.6 million tons, or 72 percent, originated on the CCC barter program. There were 1,531 inspections made of materials in the stockpile.

Plans were formulated to inactivate the warehouse functions at the GSA-DMS Buffalo warehouse, phased over a two-year period. This action will result in a saving of \$250,000 a year in recurring storage charges.

On July 1, 1962, the Army Depot in Marion, Ohio and the Air Force Depot in Topeka, Kansas were transferred to GSA. Stockpile materials are stored at these locations, and the portions of these facilities being utilized for this storage program will be operated as General Services Administration-Defense Materials Service depots.

During the report period, 108 new preservation and maintenance projects were initiated, and 112 projects previously authorized were completed. These projects cover all phases of qualitative maintenance.

Disposals of materials in the past two years have reduced storage costs by \$245,000 annually. Most of these savings resulted from the sale of rubber from commercial warehouses and military depots..

## Notes on Strategic and Critical Materials

### ALUMINUM

Between January and June 1962, 21,865 short tons of primary aluminum were delivered to the Government under the one contract that remains open for this metal under the Defense Production Act expansion program.

### ASBESTOS

Two of the three contracts made prior to the report period with domestic producers of Arizona chrysotile asbestos are still in effect. One supplier, for a small quantity, has been declared in default. The two current contracts have been extended through October 25, 1962, and deliveries under the larger contract are expected to be completed by that date. No purchases were made against the procurement directive for fiscal year 1962 because of experience to date in obtaining suitable domestic chrysotile. GSA has recommended that chrysotile asbestos needed to meet current objectives be acquired by barter.

### BERYL

The Defense Production Act domestic beryl purchase program ended on June 30, 1962, in accordance with the terms of the program. Deliveries were in excess of 3,200 short dry tons acquired at a cost of about \$1.8 million.

### BRISTLES, HOG

The remaining quantity of approximately 9,000 pounds of bristles was disposed of during the period. This completes the disposal program in which over 3.5 million pounds of bristles from the national stockpile were sold at public auction or transferred to other Government agencies.

### CASTOR OIL

On June 21, 1962, the Congress approved proposed disposal of 155,676,000 pounds of excess castor oil. Invitations-to-bid were issued on June 27 for 5,045,417 pounds, with an opening date of July 25.

### CELESTITE

During the period, the Congress approved the proposed disposal of 28,816 short tons of celestite which do not meet stockpile specifications. An invitation for sealed bids on 12,500 short tons was issued for opening on August 10.

### CHROMITE

Approximately 1,700 long dry tons of low-grade metallurgical chromite authorized for disposal in 1959 have now been sold. In June, the Congress approved the proposed disposal of 1,890 long tons of sub-specification chromite ore. Invitations-to-bid on this material have been issued for opening on August 16.

### COBALT

The proposed disposal of approximately 265,000 pounds of cobalt oxide and approximately 5,500 pounds of cobalt carbonate was approved by the Congress in June. Disposal of approximately nine short tons of cobalt in rondelle form also was approved by the Congress. The six months' waiting period has already expired for these disposals.

### COCONUT OIL

During the period January through June 1962, over 29 million pounds of coconut oil were sold.

### COLUMBIUM-TANTALUM

In accordance with OEP directives, upgrading of stockpiled columbium-tantalum concentrates to columbium and tantalum carbide powders was contracted for during the period. Arrangements were made for payment in excess tungsten concentrates from the DPA inventory. The entire quantity of 18,900 long tons of columbium bearing tin slags authorized for disposal from the DPA inventory was sold during this period.

### COPPER

Almost 8,600 short tons of copper from the DPA inventory were sold to other Government agencies from January through June. GSA continues to supply the entire needs of the Bureau of the Mint for copper, and most of these sales were to that agency. There remains a balance of about 7,000 short tons available for transfer to other Government agencies.

GSA contracted for the upgrading of copper in the national stockpile to oxygen-free copper, as directed by OEP. Payment for the processing will be made in excess copper from the DPA inventory.

### CORDAGE FIBERS

Approximately 12 million pounds of abaca and 40.7 million pounds of sisal were rotated during the January-June period. This brings rotation of these



materials for fiscal year 1962 to about 19 million pounds of abaca and 70.9 million pounds of sisal.

The proposed disposal of 7.5 million pounds of excess abaca and 10 million pounds of excess sisal was approved by the Congress in June. The six months' waiting period has been completed for the disposal of these fibers.

#### *COTTON, EXTRA LONG STAPLE*

Cotton was removed from the stockpile list in 1957. The Department of Agriculture has sold 43,800 bales of the 50,000 bales previously transferred to it in 1957 in accordance with Public Law 85-96. To authorize the disposal of extra long staple cotton remaining in the strategic stockpile, the Congress enacted Public Law 87-548, which was approved July 25, 1962. This law provides that all extra long staple cotton remaining in the Strategic and Critical Materials Stockpile be withdrawn and transferred or made available to the Commodity Credit Corporation for disposition. The domestically grown cotton made available may be sold domestically for unrestricted use under pricing conditions established under the Agricultural Act of 1949. The foreign grown cotton may be sold only for export at not less than the world market price and quotas are required to be determined and announced for both commercial sales and disposals under the Agricultural Trade Development and Assistance Act of 1954, as amended.

#### *CRYOLITE, SYNTHETIC*

During the period, 4,800 short tons of synthetic cryolite were disposed of. GSA continues to attempt to interest aluminum producers and others in the balance of this material.

#### *DIAMOND DIES, SMALL*

Rejections remain high against deliveries being made under current contracts for diamond dies. During the report period, one domestic producer and one supplier of foreign dies were declared in default. Purchases to replace undelivered dies are under negotiation. Acquisition of fine wire required for testing purposes continues to be a problem. OEP has been requested to authorize GSA to inspect and accept dies by microscopic means as an alternative to testing by wire drawing tests. In the meantime, GSA is attempting to develop new sources for testing wire in diameter below .0003".

#### *FEATHERS AND DOWN*

Sales commitments were made for the disposal of approximately 625,000 pounds of surplus waterfowl feathers and down during the January-June period. These commitments complete the disposal of over 3.9 million pounds of this material authorized for sale. Commercial sales aggregated 671,000 pounds (17 percent) and approximately 3,259,000 pounds (83 percent) were transferred to other Government agencies.

#### *GRAPHITE*

No bids were received in response to an invitation for the sale of 1,914 short tons of graphite from the national stockpile. This material will be re-advertised in July.

#### *HYOSCINE*

During January-June 1962, about 1,835 ounces of hyoscyne were sold. This completed the disposal of all hyoscyne authorized for sale from the national stockpile.

#### *JEWEL BEARINGS*

The stockpile purchase contract with the Bulova Watch Company was extended during this report period to June 30, 1963, with renewal option for two additional years. The company continues to produce jewel bearings for the stockpile, as authorized by OEP.

In addition, pursuant to directives from the Department of Defense and OEP, GSA has executed a lease with the Bulova Watch Company which permits the company to use the Rolla, North Dakota plant for the production of jewel bearings for the national stockpile, DoD contractors, and commercial customers. The lease defines the manner in which direct orders from DoD contractors and commercial customers are to be handled and establishes a rental agreement covering the various types of orders filled.

#### *KYANITE*

During January-June, 450 short tons of kyanite were sold from the national stockpile.

#### *MAGNESIUM*

Approximately 1,225 short tons of magnesium scrap from the national stockpile were sold during the report period. This completes the disposal of the magnesium scrap authorized for disposal.

Notice was published in the Federal Register on March 15 for the proposed disposal of 12,500 short tons of magnesium ingots. Congressional approval is not required for this disposal, which can be undertaken after the waiting period expires on September 15.

#### *MANGANESE*

The proposed disposal of 63 short tons of ferromanganese and approximately 4.5 short tons of electrolytic manganese metal was approved by the Congress in June. Sealed bids were requested for these materials for opening on July 24. During the report period, proposals were solicited for the purchase or conversion to silicomanganese of low grade manganese ores stored at Butte and Phillipsburg, Montana.

#### *MICA*

The quantity limitation of 25,000 short tons of handcobbed mica in the domestic mica purchase program was reached on June 7. The closeout of

purchases was effectively carried out by the GSA regional offices and depots. As soon as the processing of mica on hand is completed and the mica shipped to permanent storage, the three depots will be shut down.

#### **MOLYBDENUM**

The Congress in June approved the proposed disposal of 5 million pounds of excess molybdenum from the national stockpile. Accordingly, disposal can be undertaken when the six months' waiting period expires on October 26.

#### **NICKEL**

Disposal of 10 million pounds of contained nickel and cobalt in nickel oxide excess to the national stockpile was approved by the Congress in June. The six months' waiting period for this proposed disposal expired on September 8. The Congress also approved the disposal of approximately 96 short tons of 91 percent nickel in ingot form and four short tons of sintered nickel powder in the form of "cups." The waiting period for these two lots has already expired. Sales were made to the Bureau of the Mint of an additional 754,000 pounds of nickel from the DPA inventory during the six months. During the period, sales of Nicaro nickel to industry also continued.

#### **NON-FERROUS AND PLATINUM SCRAP**

The Congress approved the proposed disposal of approximately 711 short tons of miscellaneous lots of nonferrous scrap and approximately 4,471 troy ounces of platinum scrap. The six months' waiting period for these disposals has already expired.

#### **PALM OIL**

During the period January-June 30, 1962, over 5.6 million pounds of palm oil were sold from the stockpile. Additional sales will be scheduled periodically.

#### **PLATINUM GROUP METALS**

Approximately 848 troy ounces of rhodium from the stockpile were disposed of during this period. This completes disposal of this item in the platinum metals group.

#### **QUINIDINE**

During the report period, January-June 1962, 30,000 ounces of quinidine were sold from the stockpile.

#### **QUININE**

During the period January through June, 7,002,492 ounces of quinine were sold. A recommendation for award of the remainder of the stockpile quantity is now in process.

#### **RUBBER**

During the report period, 30,000 long tons of excess natural rubber were sold from the stockpile.

#### **SAPPHIRE AND RUBY**

Almost 1.8 million carats of sapphire and ruby were disposed of from the national stockpile during the report period, which is the entire quantity authorized for disposal.

#### **SHELLAC**

During the report period, over 228,000 pounds of shellac were sold from the stockpile.

#### **SILK WASTE AND NOILS**

Approximately 425,000 pounds of silk waste were sold in two auctions held in the January-June period. Total sales for fiscal year 1962 were about 1,250,000 pounds in five auctions. Less than 150,000 of the 1,950,000 pounds made available for disposal remain unsold.

Notices for the disposal of 440,246 pounds of silk noils and an additional 961,061 pounds of silk waste were published in the Federal Register during this period. The Congress approved the proposed disposal of the silk noils in June, and Congressional approval is not required for disposal of the additional silk waste. The six months' waiting period for disposal of the waste expired on October 17.

#### **TIN**

In June, the Congress approved the proposed disposal of 50,000 long tons of excess tin from the national stockpile.

Over 700 long tons of tin were disposed of from the Federal Facilities Corporation inventory, which completes disposal of this entire inventory.

#### **TUNGSTEN**

During the report period, about 1,470,721 pounds, amounting to over 92,700 short ton units, were sold from the DPA inventory.

#### **VEGETABLE TANNINS**

*Chestnut, Quebracho, and Wattle*

Congressional approval for the sale of 3,500 long tons of vegetable tannins (chestnut, quebracho, and wattle extracts) was granted on June 21. The waiting period has expired, and procedures for sale are being developed.

#### **VANADIUM**

During the period, the Congress approved the disposal of approximately 65,447 pounds (gross weight) of ferrovanadium which do not meet stockpile specifications. A contract was executed providing for the conversion of Government-owned vanadium concentrates to ferrovanadium, with payment to be made in aluminum.

#### **ZIRCON**

During January-June, 2,580 short tons of zircon concentrates were sold. Approximately 3,100 additional short tons available for sale will be offered late in 1962.

# Conservation and Development of Domestic Sources

## DEPARTMENT OF AGRICULTURE

### Cordage Fibers

The *sansevieria hybrid*, Florida H-13, is being formally released for use in sub-tropical areas. This hybrid has been tested in several locations in Florida, Guatemala, and Mexico. It is cold tolerant, and has the ability to make a good regrowth after harvest.

In a yield test, Florida H-13 produced more fiber at first harvest than any back cross (*S. trifasciata* x *S. deserti*) x *S. trifasciata* clone.

Two-year old planting material of Florida H-13 produced a greater number of plants during the early stages of growth than did one-year old or three-year old planting stock. However, age of planting material had no effect on yield of fiber at harvest time.

Tests also indicated that maximum yield cannot be obtained by early harvesting.

A large number of *kenaf* lines were tested for sensitivity to day-length. Several lines which appear to be insensitive will be increased and tested further for possible use in extending the planting season, which now is limited in Florida to April through July.

Thirteen hexaploid lines (*Hibiscus cannabinus* x *H. acetosella*), all resistant to root knot nematodes, were found to be unsuitable for fiber purposes because of low fiber content and because of a marked tendency to lodge.

The fumigation of soil heavily infested with root-knot nematodes resulted in a 48 percent increase in seed yield over non-treated soil.

Further work with interspecific hybridization of *Hibiscus* species in an attempt to obtain nematode-resistant-fiber types, showed that somewhat fertile hybrids could be produced by crossing *H. radiatus* with *H. acetosella*, and by crossing *H. radiatus* with *H. cannabinus*.

In screening available *Hibiscus* species for nematode resistance, *H. acetosella*, *H. surrantensis*, *H. costatus*, and some lines of *H. sabdariffa* were found to be most resistant.

A good deal of practical knowledge and experience was gained on kenaf production, harvesting, and farm processing last season as a result of the 20 acres that were planted in the vicinity of Belle Glade, Florida. Yields of around 1,000 pounds of dry fiber per acre did not come up to expectation, but there was some satisfaction in learning that even at this yield level the fiber could be produced at around 12 cents a pound. Some improvement in unit cost can be expected from higher yields, but it will not be in direct proportion since much of the

expense of producing the fiber is based on the retting, washing, and drying costs, which are associated with the amount being handled. Although the field quality appeared to be excellent and the color and cleanliness of the raw fiber compared favorably with imported jute, the strength did not measure up to expectations.

In line with the principal objectives of the 1962 season for improving kenaf processing methods, experimental equipment for handling, retting, washing, and drying is under construction. As in the development of a mechanical harvester, emphasis will be placed on maintaining the inherent strength characteristics of the raw fiber throughout the processing system.

For the purpose of studying fiber quality in relation to soil and climatic conditions, experimental plantings have been made on both muck and mineral soils in Florida and on mineral soil in southern Georgia.

### Oils

*Castorbean* production and breeding research has been continued in cooperation with the California, Texas, Oklahoma, and Mississippi Experiment Stations. Progress has been made in breeding lines resistant to capsule drop in Mississippi, and to *Alternaria* leaf spot in Oklahoma. A quick method has been developed to test capsules in the laboratory to determine resistance to *Botrytis* blight. Tests in Mississippi indicate excellent yields of castorbeans may be harvested in spite of capsule drop if the plants are dessicated before the disease develops.

According to data recently summarized, high oil percentage appears to be inherited as a dominant character with some high oil lines more prepotent than others. This seems to indicate the necessity of only one parent being high in oil in making commercial  $F_1$  hybrids. Data have been obtained showing that large seed size and high oil content are not positively correlated, indicating that seed size in itself probably is unimportant.

To overcome problems encountered in harvesting, an attachment for a combine which will permit faster ground speeds and remove seed capsules while damp is being developed.

The application of defoliant on castorbeans by growers has not given consistent drying results when applied at different times during the harvest season. The plants and capsules are not always conditioned to where harvesters can remove all the seed effectively. It is planned to continue studies for determining defoliation requirements for mechanical harvesting.

#### **Ganning Materials**

The last crop of canaigre to be grown prior to termination of the project now has matured in the field. No data have been collected. Harvest will be completed soon and final reports prepared upon completion of summarization of data.

#### **Opium Poppy**

Activity on this project has been limited to the increase of seed of a superior line to place in storage for future use. Data are not now available, but seed yield is not expected to be as high as in previous increases. The purpose of the seed storage is to insure availability for use in a national emergency.

### **DEPARTMENT OF THE INTERIOR**

#### **Beryllium**

Bureau of Mines studies indicated that concentrating bertrandite from clays of the Spor Mountain area in Utah by milling methods was not feasible and that hydrometallurgical techniques will have to be employed to extract beryllium salts directly from the ore. Good progress was made in producing high-purity beryllium from the chloride by Kroll process reduction and in producing beryllium powder, low in chlorine, from beryllium electrolytic flake.

Public announcement by the Geological Survey of the discovery of a potentially economic beryllium occurrence near Rapid River, Alaska, stimulated commercial interest in exploration for beryllium ore deposits in this area, which is about 75 miles from the Lost River tin mine where beryllium mineralization has previously been reported.

An improved laboratory-model neutron-activation analyzer has been developed to provide rapid, low cost beryllium analyses in the geochemical prospecting for beryllium ores.

#### **Fluorspar**

Bureau of Mines laboratory research and pilot plant testing of flotation methods for recovering acid-grade fluorspar from a complex fluorspar-barite ore in Arizona and a somewhat similar one from Kentucky were completed. High recoveries of concentrates of acid-grade spar, and of barite suitable for oil well drilling mud, were obtained. Operating companies have expressed an interest in using the developed sodium fluoride-lignin sulfonate selective flotation method.

#### **Rare-Earth Elements**

Bureau of Mines basic research on rare-earth metals continued and consisted principally of investigations of properties, separatory and analytical techniques, and metal reduction and refining methods. Good progress was made in supplying high-temperature thermo-chemical data for rare-earth oxides, developing a solvent extraction technique to separate effectively yttrium from heavy rare-earth elements, and developing an ion exchange method for preferential separation of heavy rare-earth elements.

#### **Rhenium**

An analytical technique for the determination of rhenium is both more sensitive and faster than previous techniques. Based on the catalytic role of rhenium in the reaction between stannous chloride and sodium tellurate, the technique is sensitive to a few tenths of a part per million of rhenium.

# **Reports Dealing With Stockpile Material Issued by U.S. Geological Survey**

**January-June 1962**

## **Professional Papers**

- 338           Geology and ore deposits of east Shasta copper-zinc district, Shasta County, California.
- 342           Geology and ore Deposits of the Globe-Miami mining district, Arizona. (copper)
- 353           Beryl resources of New Hampshire.
- 361           Stratigraphy of the East Tintic Mountains, Utah. (silver, lead, zinc)
- 378-B        Analysis of plastic deformation according to Von Mises' theory, with application to the  
              South Silverton area, San Juan County, Colorado. (lead, zinc, silver)
- 450-B, C     Geological Survey Research, 1962. (beryllium, copper, tungsten, etc.)

## **Bulletins**

- 1107-B       Heavy mincrals as guides to uranium-vanadium ore deposits in the Slick Rock district,  
              Colorado.
- 1108-B       Geology of the Craig quadrangle, Alaska. (copper, iron, gold, molybdenum)
- 1110-A       Lead-zinc deposits of the Boquira district, State of Bahia, Brazil.
- 1123-B       Geology of the Montfort and Linden quadrangles, Wisconsin. (zinc, lead)
- 1142-F       Geology of the magnesite belt, Stevens County, Washington.

## **Maps**

- GQ-153       Geology of the Delano Peak quadrangle, Utah.
- GQ-154       Geology of the Marysvale quadrangle, Utah. (alunite, uranium, manganese, gold)
- GQ-157       Geology of the Bare Mountain quadrangle, Nevada. (fluorspar)
- MF-178       Preliminary geologic map of Eureka County, Nevada. (silver, lead, zinc, manganese)
- MF-241       Exploration for uranium-vanadium deposits, Disappointment Valley, Colorado.
- MF-244       Preliminary geologic map of the Wheeler Peak quadrangle, Nevada. (beryllium)
- MF-245       Preliminary geologic map of the Unionville quadrangle, Nevada. (tungsten, base metals)
- MF-247       Preliminary map of bedrock geology of the Nome C-1 quadrangle, Alaska. (gold, base  
              metals)
- MF-248       Preliminary map of bedrock geology of the Nome D-1 quadrangle, Alaska. (gold, base  
              metals)
- MR-13        Copper in the United States, exclusive of Alaska and Hawaii.
- MR-15        Lead in the United States, exclusive of Alaska and Hawaii.
- MR-16        Vanadium in the United States, exclusive of Alaska and Hawaii.
- MR-17        Asbestos in the United States, exclusive of Alaska and Hawaii.
- MR-18        Pyrophyllite and kyanite and related minerals in the United States, exclusive of Alaska  
              and Hawaii.
- MR-19        Zinc in the United States, exclusive of Alaska and Hawaii.
- MR-20        Antimony in the United States, exclusive of Alaska and Hawaii.
- MR-22        Bismuth in the United States, exclusive of Alaska and Hawaii.
- MR-23        Manganese in the United States, exclusive of Alaska and Hawaii.
- MR-26        Chromite in the United States, exclusive of Alaska and Hawaii.
- MR-27        Magnesite and brucite in the United States, exclusive of Alaska and Hawaii.
- MR-30        Mercury in the United States, exclusive of Alaska and Hawaii.

# **Reports Dealing With Strategic and Other Materials Issued by the Bureau of Mines**

**January-June 1962**

## **Reports of Investigation**

- 5855 Low-Temperature Heat Capacities and Entropies at 298.15° K. of Some Sodium- and Calcium Aluminum Silicates.
- 5857 Thermodynamic Data for Lanthanum Sesquioxide. (rare-earth oxide)
- 5859 High-Temperature Heat Contents and Entropies of Bismuth Chloride and Cerous Chloride.
- 5898 Field Test for Columbium.
- 5899 Electric Smelting and Gaseous Refining of Cement-Copper Precipitate.
- 5900 Heats and Free Energies of Formation of Some Hydrated and Anhydrous Sodium- and Calcium-Aluminum Silicates.
- 5903 Semiquantitative Spectrographic Analysis of Tungsten.
- 5910 Extraction and Separation of Yttrium and Rare-Earth Elements Found in Euxenite.
- 5916 Recovery of Thorium From Ores in Colorado, Idaho, and Montana. (rare earth)
- 5917 Recovery of Thorium from a Wyoming Ore. (rare earth)
- 5918 Separating Tantalum and Columbium by Solvent Extraction: HF-HCl-Diethyl Ketone System.
- 5923 Amines in Liquid-Liquid Extraction of Rare-Earth Elements.
- 5924 Leaching Michigan Copper Ore and Mill Tailing with Acidified Ferric Sulfate.
- 5925 Iron-Gadolinium Phase Diagram. (rare earth alloy development)
- 5933 Quality of Zirconium Prepared by Different Reductants.
- 5934 Production of Molybdenum Metal by Magnesium Reduction of Molybdenum Oxides.
- 5935 Structural and Optical Data on Synthetic Asbestiform Materials: Potassium-Lead Silicate and Lead Aluminum Silicate.
- 5936 Properties of Arc-Melted Iron-Chromium Alloys.
- 5937 Preparing Metal-Grade Vanadium Oxide From Red Cake and Mill Solutions.
- 5938 Studies of the MnO-SiO<sub>2</sub> Binary System. (manganese)
- 5939 Sintering and Smelting Manganese Concentrates From Maggie Canyon Ore, Artillery Mountains Area, Ariz.
- 5941 Solvent Extraction of Beryllium From Sulfate Solutions by Alkylphosphoric Acids.
- 5945 Corrosion of Zirconium in Cupric and Ferric Chlorides.
- 5949 Effects of Hafnium Additions on Properties of Vanadium.
- 5951 Chemical Reactions in the Electric Arc: Reactive Metal Carbides. (rare earth)
- 5954 Low-Temperature Heat Capacities and Entropies at 298.15° K. of three Calcium Vanadates.
- 5955 A Study of Copper Reverberatory Slags From White Pine, Mich.
- 5957 Effects of Impurities on Sintered Mullite. (bauxite-kyanite)
- 5959 Electrorefining Beryllium. Studies of Operating Variables.
- 5960 Precipitation and Electrodeposition of Mercury in Caustic Solutions.
- 5963 Experiments in Purifying Solutions From Line-Sintered Beryl Concentrates.
- 5964 High-Temperature Heat Contents and Entropies of Zirconium Fluoride and Zirconium Sulfate.
- 5966 Fluorescent X-Ray Spectrography: Determination of Trace Elements.
- 5967 Thermodynamic Properties of Strontium Bromide and Strontium Nitrate. (celestite)
- 5969 Radiation Hazards Encountered in Arc Melting Thorium. (rare earth)
- 5972 Heats and Free Energies of Formation of Antimony Sesquioxide and Tetroxide.
- 5973 Heats of Formation of Sodium Molybdates and Tungstates.
- 5975 Some Properties of Vanadium.
- 5980 Use of Radioactive Tracers in Beryllium Extractive Metallurgy Research.
- 5981 Melting Temperatures of Fluorimicas and Related Compounds.
- 5982 Thermal Expansion and Phase Inversion of Six Refractory Oxides. (beryllium, rare-earth)
- 5987 Columbium-Vanadium Binary Alloys for High-Temperature Service.
- 5991 Investigation of Mercury-Antimony Deposits Near Flat, Yukon River Region, Alaska.
- 5993 Purification of Electrolytes for the Deposition of High-Purity Nickel.
- 5994 Effect of Ionizing Radiation on the Chlorination of Mixtures of Rutile, Carbon, and Various Catalysts.

- 5997 Methods for Producing Alumina From Clay: An Evaluation of the Sulfurous Acid-Caustic Purification Process.
- 6001 Low-Temperature Heat Capacity and Entropy at 298.15° K. of Red Mercuric Sulfide.
- 6004 Radioisotopes as Tracers in Volatilization Studies of Selenium and Tellurium.
- 6005 Methods for Determining Microquantities of Impurities in Tungsten.
- 6011 Disposal of Radioactive Waste in the Vitro-Type Uranium Milling Flowsheet. (rare-earth)
- 6013 Inyo Beryl Deposit, Inyo County, Calif.
- 6016 A Preferential Stain for Beryl.
- 6020 Electron Micrographs of Some Unusual Inorganic Fibers. (Series of electron micrographs showing the important morphological differences exhibited by potassium-lead silicate, lead-aluminum silicate, chrysolite, wollastonite, silicon nitride, potassium titanate, cobalt chrysotile, magnesio-fluor-richterite, fluor-richterite, refractory oxide fiber, silicon carbide, massive serpentine, and polygorskite.)

#### Information Circulars

- 8033 Mining and Furnacing Mercury Ore at the New Idris Mine, San Benito County, Calif.
- 8045 Trends in Alaska's Mineral Industry. (mercury)
- 8046 Trends and Outlook in the Pacific Northwest Aluminum Industry.
- 8048 Bibliography of Zirconium: Supplement to Information Circulars 7771 and 7830.
- 8050 The Pacific Northwest Ferroalloy Industry. (chromium, manganese, nickel)
- 8060 Vanadium, A Materials Survey.
- 8064 Copper, Lead, and Zinc in Three Recessions Following World War II.
- 8068 Mining and Milling Methods and Costs, Vermont Asbestos Mines, the Ruberoid Co., Hyde Park, Vt.
- 8071 Quadratic Functions for Copper Radiation, 0° to 180° 20.
- 8078 Tungsten Deposits of Gila, Yavapai, and Mohave Countries, Ariz.
- 8095 Methods and Costs of Mining and Washing Manganese Ore, Batesville District, Ark.

#### Bulletins

- 601 Contributions to the Data on Theoretical Metallurgy, XV. A Reprint of Bulletins 383, 384, 393, and 406.

**STATUS OF OBLIGATIONAL OPERATIONS AS OF JUNE 30, 1962**  
**Under PL 117 and PL 520 for The National Stockpile**

| AUTHORITY   | APPROPRIATED FUNDS <u>a/</u>     | AUTHORIZATIONS FOR                 |   | TOTAL OBLIGATIONAL AUTHORITY (CUMULATIVE) <u>d/</u> |
|---|----------------------------------|------------------------------------|---|---|
|   |                                  | MAKING ADVANCE CONTRACTS <u>b/</u> | LIQUIDATING OUTSTANDING ADVANCE CONTRACTS <u>c/</u> |   |
| <u>Under PL 117 - 76th Congress</u>                     |                                  |                                    |   |   |
| PL 361 - 76th Congress, August 9, 1939                  | \$ 10,000,000                    | \$                                 | \$  | \$ 10,000,000                                       |
| PL 442 - 76th Congress, March 23, 1940                  | 12,500,000                       |                                    |   | 22,500,000  |
| PL 667 - 76th Congress, June 26, 1940                   | <u>47,500,000</u>                |                                    |   | <u>70,000,000</u> <u>a/</u>                         |
| <u>Under PL 520 - 79th Congress</u>                     |                                  |                                    |   |   |
| PL 663 - 79th Congress, August 8, 1946                  | 100,000,000                      |                                    | -   | 100,000,000   |
| PL 271 - 80th Congress, July 30, 1947                   | 100,000,000                      | 75,000,000                         | -   | 275,000,000   |
| PL 785 - 80th Congress, June 23, 1948                   | 225,000,000                      | 100,000,000                        | -   | 800,000,000   |
| PL 785 - 80th Congress, June 23, 1948                   | 75,000,000                       | -                                  | 75,000,000  | 800,000,000   |
| PL 119 - 81st Congress, June 23, 1949                   | 40,000,000                       | 270,000,000                        | -   | 1,110,000,000                                       |
| PL 150 - 81st Congress, June 30, 1949                   | 275,000,000                      | 250,000,000                        | -   | 1,635,000,000                                       |
| PL 150 - 81st Congress, June 30, 1949                   | 250,000,000                      | -                                  | 250,000,000   | 1,635,000,000                                       |
| PL 434 - 81st Congress, October 29, 1949                | -                                | -                                  | 100,000,000 <u>e/</u>                               | 1,535,000,000                                       |
| PL 759 - 81st Congress, September 6, 1950               | 365,000,000                      | -                                  | 240,000,000   | 1,660,000,000                                       |
| PL 759 - 81st Congress, September 6, 1950               | 240,000,000                      | 125,000,000                        | -   | 2,025,000,000                                       |
| PL 843 - 81st Congress, September 27, 1950              | 573,232,449 <u>g/</u>            | -                                  | -   | 2,598,232,449                                       |
| PL 911 - 81st Congress, January 6, 1951                 | 1,834,911,000                    | -                                  | -   | 4,433,143,449                                       |
| PL 253 - 82nd Congress, November 1, 1951                | 590,216,500                      | -                                  | -   | 5,023,359,949                                       |
| PL 253 - 82nd Congress, November 1, 1951                | 200,000,000                      | -                                  | 200,000,000   | 5,023,359,949                                       |
| PL 455 - 82nd Congress, July 23, 1952                   | 203,979,000                      | -                                  | 70,000,000  | 5,157,338,949                                       |
| PL 176 - 83rd Congress, July 31, 1953                   | -                                | -                                  | 30,000,000  | 5,127,338,949                                       |
| PL 428 - 83rd Congress, June 24, 1954                   | -                                | -                                  | 27,600,000  | 5,099,738,949                                       |
| PL 663 - 83rd Congress, August 26, 1954                 | 379,952,000 <u>h/</u>            | -                                  | -   | 5,479,690,949                                       |
| PL 112 - 84th Congress, June 30, 1955                   | 321,721,000 <u>i/</u>            | -                                  | -   | 5,801,411,949                                       |
| PL 112 - 84th Congress, June 30, 1955                   | 27,400,000                       | -                                  | 27,400,000  | 5,801,411,949                                       |
| PL 844 - 85th Congress, August 28, 1958                 | 3,000,000                        | -                                  | -   | 5,804,411,949                                       |
| Rescinded by PL 255 - 86th Congress, September 14, 1959 | -58,370,923 <u>j/</u>            | -                                  | -   | 5,746,041,026                                       |
| PL 626 - 86th Congress, July 12, 1960                   | 22,237,000 <u>k/</u>             | -                                  | -   | 5,768,278,026                                       |
| PL 141 - 87th Congress, August 17, 1961                 | <u>16,682,510</u> <u>l/</u>      | -                                  | -   | <u>5,784,960,536</u>                                |
| Total PL 520  | <u>5,784,960,536</u> <u>m/</u>   | <u>1,020,000,000</u>               | <u>1,020,000,000</u>                                | <u>5,784,960,536</u>                                |
| Total PL 117 and PL 520                                 | <u>\$5,814,960,536</u> <u>m/</u> | <u>\$1,020,000,000</u>             | <u>\$1,020,000,000</u>                              | <u>\$5,814,960,536</u>                              |

a/ Congressional appropriations of funds for stockpiling purposes.

b/ Congressional appropriations of contracting authority for stockpiling purposes in advance of appropriation of funds.

c/ Congressional authorization to liquidate outstanding obligations incurred under previously granted advance contract authority.

d/ Cumulative total of appropriated funds and advance contract authorization, less authorization to liquidate outstanding advance contracts.

e/ Excludes \$8,845,792 received from sale of stockpile materials for wartime consumption. Receipts were returned to Treasury, February 1948.

f/ Cancellation of previously authorized authority to make contracts.

g/ Excludes \$25,404,921 transferred to operating expenses for rehabilitation of Government-owned material producing plants.

h/ Excludes \$48,000 transferred to Transportation and Public Utilities Service, GSA.

i/ Excludes \$430,000 transferred to Transportation and Public Utilities Service, GSA and \$199,349,000 transferred to General Fund Receipts on June 27, 1956 - PL 623 - 84th Congress.

j/ As of June 30, 1959 this amount included cash of \$52,350,792 and receivables of \$6,020,131.

k/ Excludes \$7,763,000 transferred to other GSA Funds for classified and wage board salary increases during 1961.

l/ Appropriation of \$40,000,000 of which \$22,700 transferred to Office of Administrator, GSA and \$23,294,790 transferred to General Fund Receipts.

m/ Excludes receipts from rotational sales.



TOTAL OBLIGATIONS AND EXPENDITURES OF STOCKPILING FUNDS  
CUMULATIVE AND BY FISCAL PERIOD THROUGH JUNE 30, 1962

Under PL 117 and PL 520 for THE NATIONAL STOCKPILE

| Fiscal Period              | OBLIGATIONS INCURRED              |                                      | EXPENDITURES           |                                      |
|----------------------------|-----------------------------------|--------------------------------------|------------------------|--------------------------------------|
|                            | Net Change<br>By Fiscal<br>Period | Cumulative<br>As of<br>End of Period | By<br>Fiscal<br>Period | Cumulative<br>As of<br>End of Period |
| Prior to Fiscal Year 1948  | \$ 123,871,685                    | \$ 123,871,685                       | \$ 66,330,731          | \$ 66,330,731                        |
| Fiscal Year 1948           | 252,901,411                       | 376,773,096                          | 82,907,575             | 149,238,306                          |
| Fiscal Year 1949           | 459,766,881                       | 836,539,977                          | 304,486,177            | 453,724,483                          |
| Fiscal Year 1950           | 680,427,821                       | 1,516,967,798                        | 440,834,970            | 894,559,453                          |
| Fiscal Year 1951           | 2,075,317,099                     | 3,592,284,897                        | 655,537,199            | 1,550,096,652                        |
| Fiscal Year 1952           | 948,117,547                       | 4,540,402,444                        | 844,683,459            | 2,394,780,111                        |
| Fiscal Year 1953           | 252,375,163                       | 4,792,777,607                        | 906,158,850            | 3,300,938,961                        |
| Fiscal Year 1954           | 116,586,681                       | 4,909,364,288                        | 644,760,321            | 3,945,699,282                        |
| Fiscal Year 1955           | 321,799,833                       | 5,231,164,121                        | 801,310,094            | 4,747,009,376                        |
| Fiscal Year 1956 <u>C/</u> | 251,692,667                       | 5,482,856,788                        | 382,011,786 <u>C/</u>  | 5,129,021,162 <u>C/</u>              |
| Fiscal Year 1957           | 190,000,109                       | 5,672,856,897                        | 354,576,558            | 5,483,597,720                        |
| Fiscal Year 1958           | 54,473,250                        | 5,727,330,147                        | 173,753,997            | 5,657,351,717                        |
| Fiscal Year 1959           | 38,710,879                        | 5,766,041,026                        | 65,260,098             | 5,722,611,815                        |
| Fiscal Year 1960           | 19,859,290                        | 5,785,900,316                        | 49,227,142             | 5,771,838,957                        |
| Fiscal Year 1961           | 29,082,919                        | 5,814,983,235                        | 33,325,431             | 5,805,164,388                        |
| Fiscal Year 1962           | 31,179,407                        | 5,846,162,642                        | 33,695,431             | 5,838,859,819                        |

A/ Figures are the sum of obligations incurred under PL 520, 79th Congress and PL 117, 76th Congress.  
Final obligations under PL 117, 76th Congress were incurred in Fiscal Year 1969.

B/ Figures are the sum of expenditures under PL 520, 79th Congress and PL 117, 76th Congress.  
Final expenditures under PL 117, 76th Congress were made in Fiscal Year 1951.

C/ 1956 and subsequent fiscal periods and cumulative expenditures are reported on an accrual basis.

**EXPENDITURES OF STOCKPILE FUNDS, BY TYPE CUMULATIVE AND FOR FISCAL YEAR 1962**

(for the National Stockpile)

| Type of Expenditure   | Cumulative Through<br>December 31 1961 | Six Months Ended<br>June 30, 1962 | Cumulative Through<br>June 30, 1962 |
|---|--|-----------------------------------|-------------------------------------|
| <b>Expenditures</b>   |  |                                   |                                     |
| Gross Total   | \$6,362,459,097                        | \$18,418,693                      | \$6,380,877,790                     |
| Less: Adjustment for Receipts from<br>Rotation Sales and Reimbursements | 541,835,074                            | 182,897                           | 542,017,971                         |
| Net Total   | 5,820,624,023                          | 18,235,796                        | 5,838,859,819                       |
| Material Acquisition Costs, Total                                       | 5,432,021,947                          | 2,564,110                         | 5,434,586,057                       |
| Stockpile Maintenance Costs, Total                                      | 339,182,254                            | 13,409,601                        | 352,591,855                         |
| Facility Construction   | 43,772,457                             | 0                                 | 43,772,457                          |
| Storage and Handling Costs  | 203,478,733                            | 6,636,250                         | 210,114,983                         |
| Net Rotation Costs  | 91,931,064                             | 6,773,351                         | 98,704,415                          |
| Administrative Costs  | 45,423,028                             | 1,217,422                         | 46,640,450                          |
| Operations, Machine Tool Program  | 3,996,794                              | 1,044,663                         | 5,041,457                           |

a/ Cumulative figures are the total of expenditures under PL 117, 76th Congress and PL 520, 79th Congress. Expenditures under PL 117 totaled \$70,000,000 of which \$55,625,237 was for materials acquisition costs and \$14,374,763 was for other costs. Final expenditures under PL 117 were made in FY 1951.

## Report on the Barter Program Submitted to the President by the Executive Stockpile Committee

This Report stems from a recommendation made in the Executive Stockpile Committee's Report to the President of March 19, 1962. In the body of its Report, the Committee commented that:

"There was considerable discussion by the Committee of the implications of adopting a disposal program [for strategic and critical materials] prior to a determination of the future course of the Barter Program of the Department of Agriculture. The Committee feels that a thorough examination of the relationship of these programs should be undertaken immediately."

On this phase of its study, the Committee recommended that:

"A group of interested agencies, including the Department of Agriculture, give immediate attention to the relationships of the Strategic and Critical Materials Stockpile and the Department of Agriculture barter program for strategic materials."

In acting upon the Committee's recommendations, you requested the Office of Emergency Planning "to examine the problems of the barter program in consultation with the Department of Agriculture and other interested agencies." Accordingly, a representative of the Department of Agriculture was added to the Committee for this purpose. Representatives of the Treasury Department, the Bureau of the Budget, and the Council of Economic Advisers served as observers.

Barter legislation has been enacted primarily to provide a means of moving surplus agricultural products into export markets. Since 1949, over \$1.5 billion of surplus agricultural commodities have been disposed of by barter.

Agricultural surpluses sold through barter have been exchanged primarily for foreign-produced strategic and critical materials, the bulk of which has been transferred to the Supplemental stockpile, but sizable quantities of which have also been transferred to the National Stockpile and to other Government agencies to meet their needs. Some of the material still in the Supplemental Stockpile is counted toward the achievement of National Stockpile objectives. The program has thus contributed to the disposal of excess agricultural commodities which deteriorate and are expensive to store in exchange for materials that entail less risk of loss through deterioration and are far less expensive to store.

While barter has been helpful in disposing of agricultural surpluses, it has raised some diffi-

cult problems. It is generally assumed that some part of the agricultural commodities disposed of through barter transactions represent displacements of U.S. dollar sales of similar commodities, as well as sales of friendly third countries. There is, however, no reliable way of demonstrating that such displacements have occurred, or of determining the value of cash sales that might have been made if barter transactions had not been completed.

To the extent that bartered commodity exports have displaced U.S. cash sales of such commodities and have resulted in the acquisition of foreign materials which would not have been bought for dollars, barter has had an adverse effect on the balance of payments. It has had a favorable effect on the balance of payments, however, to the extent that bartered commodity exports were additional to cash export sales and were for foreign materials and goods that would otherwise have been bought for dollars.

In certain instances, barter has been a competitive device, sometimes on a price-reducing basis, through which U.S. agricultural commodities have moved into foreign markets closed to regular cash sales of similar commodities. Its competitive aspects have, on some occasions, been a source of dissatisfaction to friendly countries exporting the same commodities. Barter thus may not always be compatible with the promotion of free multilateral trade and with the advancement of friendly relations with countries exporting the same agricultural products.

The volume of United States barter exports, however, has been a relatively small factor in world trade in agricultural commodities. Until recently, barter transactions have amounted to about \$160 million a year; they have been at a lower level during the past twelve months.

In some respects barter is a rudimentary method of trade, although private and commercial channels have been utilized to the maximum practicable extent and the role of government has been minimized.

The Executive Stockpile Committee recognizes both the advantages and the disadvantages of the barter program. The Committee does not see a need for restricting present statutory authorizations for disposing of surplus agricultural commodities by this method. It believes that barter, properly used, can continue to be a helpful device for disposing of surplus agricultural commodities. It believes, however, that the program should be appropriately controlled to avoid harm to our broader national objectives.

The Committee further believes that future barter contracting must be on a more selective basis than in the past. Now that strategic stockpile objectives have been met and exceeded for most strategic and critical materials, the need for barter to meet such objectives has been largely eliminated, although the possibility of continuing to barter for materials that are not needed solely for defense purposes is recognized. Other possibilities for barter can be the use of surplus commodities to procure non-strategic goods such as survival items and offshore procurement for the Department of Defense and the Agency for International Development, and as an instrument to assist the less-developed countries.

### RECOMMENDATIONS

In light of the foregoing comments and its considerations of the barter program, the Committee recommends that:

1. Due regard must be given to foreign policy considerations and balance-of-payment problems in carrying out the barter program. The Secretary of Agriculture should consult with the Secretary of State and the Secretary of the Treasury, respectively, concerning the general impact which the barter program has on these considerations.
2. Greater emphasis than in the past should be given to the use of barter transactions for the procurement of non-strategic-materials items (including, but not limited to, offshore procurement) which meet approved program requirements of U.S. Government agencies within funds currently available or within procurement authority which extends over a period of years and for which dollars would normally be spent abroad.
3. The Department of Agriculture should review with appropriate Federal agencies the opportunities for the enlargement of the use of barter in support of currently budgeted programs or programs which have procurement authority extending over a period of years. The Department of Defense and the Agency for International Development should cooperate with the Department of Agriculture by effecting offshore procurement, using qualified barter arrangements to the greatest practicable extent when dollars would otherwise be spent abroad for the items being procured. In carrying out such procurement, the Department of Agriculture should absorb any increased cost incurred by the procuring agency above that which would have been incurred had dollar procurement been utilized. Offshore military procurement by barter should not be effected in West Germany or any other country in which the United States has arrangements for payments to offset U.S. military expenditures in that country, except with the concurrence of the Secretary of the Treasury.
4. In addition to the foregoing, the Department of Defense and the Agency for International Development should continue to cooperate with the Department of Agriculture to convert to barter arrangements dollar contracts for foreign-produced items.
5. Barter should continue to be used to acquire strategic and critical materials within established maximum objectives.
6. With the exceptions indicated below, barter should not be used to acquire strategic and critical materials that are in excess of National Stockpile objectives. The exceptions are those cases where:
  - In the judgment of the Secretary of Agriculture, after consultation with the Secretary of State, and after consultation with the Secretary of the Treasury regarding U.S. foreign currency holdings, and consistent with disposal policies, it would be more advantageous to the U.S. to take a useful material in a barter transaction than to acquire additional foreign currencies; and
  - In the judgment of the Secretary of Agriculture and with the concurrence of the Secretary of State, the barter transaction would further the international economic or foreign policy interests of the United States, including help for weaker independent states to resist economic overtures and pressures from unfriendly powers.
7. Pending a decision on new legislation relating to the various inventories of strategic and critical materials, the materials acquired under Recommendation No. 6 should be transferred to the Supplemental Stockpile.
8. The Supplemental Stockpile Advisory Committee on Barter should continue to be used by the Secretary of Agriculture for advice and consultation regarding the barter program and the stockpile materials eligible for barter acquisition.
9. The Basic Principles and Rules of Application of the proposed "Revised Barter Program" prepared by the Department of Agriculture should be revised to reflect the foregoing recommendations, and should be adopted as thus revised.

## DMO V-7—General Policies for Strategic and Critical Materials Stockpiling

1. *General role of the strategic stockpile.* The strategic stockpile shall take account of the potentiality of limited war and general war and shall assume rapid mobilization in the event of an emergency.

2. *Period covered by stockpiling.* All strategic stockpile objectives shall be limited to meeting estimated shortages of materials for a three-year emergency.

3. *Stockpile objectives.* Strategic stockpile objectives shall be adequate for limited or general war, whichever shows the larger supply-requirements deficit to be met by stockpiling. Stockpile objectives shall be determined on the basis of time required for supplies of materials in a national emergency to match essential needs of the emergency. The objectives shall consist of (1) a "basic objective," which assumes reliance on sources of supply factored to reflect estimated supply risks, and (2) a "maximum objective," which includes an additional allowance to take into account the complete discounting of sources of supply beyond North America and comparably accessible areas.

Until such time as the essential needs of the nation in the event of a nuclear attack (including reconstruction) can be determined, the maximum objective shall not be less than six months' usage by industry in the United States in periods of active demand.

4. *Emergency requirements.* The requirements estimates for both limited and general war shall reflect specific requirements so far as they are applicable and available. Otherwise it shall be assumed that the total requirements would about equal the consumption by industrial capacity, considering necessary wartime limitation, conservation, and substitution measures. Requirements shall be discounted for wartime losses of consuming capacity to the extent that such losses can be reliably estimated.

5. *Emergency supplies.* Estimates of supply for the mobilization period shall be based on readily available capacity and known resources. The share available to the United States shall be discounted to reflect the risks involved internally in supply countries, the risks of concentration of the source, the risks of overseas shipping and the vulnerability of domestic sources to destruction. Domestic supplies shall be discounted in cases of excessive concentration to the extent of the estimated time required to restore capacity that may be damaged.

6. *Provision for special-property materials.* Prospective needs for high-temperature and other special-property materials shall be considered on

the basis of a three-year period beginning not more than two years in the future. Estimates of requirements therefor shall be included in the computation of objectives when there are indications of reasonably firm minimum requirements. In this connection arrangements shall be made for the regular availability of objective scientific advice to assist in such evaluation.

7. *Frequency of supply-requirements reviews.* The supply-requirements balance for any material that is now or may become important to defense shall be kept under continuing surveillance and shall be given a full-scale review at any time that a change is believed to be taking place that would have a significant bearing on the wartime readiness position. Supply-requirements balances shall be examined at least once a year to ascertain the need for a full-scale review. Priority of review shall be given to materials under procurement.

8. *Procurement policy.* The basic objectives shall be attained expeditiously. If necessary, sources of supply shall be expanded. Procurement, however, shall be tapered as the basic objectives are approached. The maximum objective shall be reached on a lower priority basis by such means as (1) deliveries under existing contracts, (2) transfers from other Government programs, (3) purchases with available foreign currencies, (4) barter of U.S. agricultural surpluses, and (5) programs to maintain the mobilization base under paragraph 9. Future long-term contracts shall contain termination clauses whenever possible.

9. *Maintenance of the mobilization base.* The mobilization base shall relate to the projected supply capacity, including standby capacity, that would be readily available for an emergency commencing on any assumed date rather than to the output of a given period. Stockpile procurement to maintain this capacity shall be undertaken only within the maximum objective. Although various measures that are feasible shall be considered for meeting a mobilization deficit of materials, measures other than stockpiling shall be undertaken only after it is clear that stockpiling is not the best solution. All inventories of Government-owned materials held for long-term storage are a part of the mobilization base. If they are sufficiently large they may eliminate the need for a producing mobilization base segment.

10. *Upgrading to ready usability.* Where the general basis for estimating supplies of a material, including allowance for plant vulnerability, does

not call for a sufficient quantity in a form suitable for immediate use to meet the initial surge of demand and abnormal conditions of intensive mobilization, a minimum readiness inventory--approximately a six months' requirement--shall be provided near centers of consumption. An inter-agency review should be undertaken to determine whether a need for a larger or lesser allowance may exist. Materials in Government inventories may be upgraded only when the net cost is less than the cost of new material. Materials will not be upgraded to such a degree, however, as to impair flexibility of use. Payment in kind may be used within the objectives to finance the upgrading, provided that the release of materials to pay for the upgrading will meet disposal criteria.

11. *Beneficiation of subspecification materials.* Subspecification-grade material in Government inventory may be beneficiated within the limits of the maximum objectives when this can be accomplished at less net cost than buying new material.

12. *Cancellation of commitments.* Commitments for deliveries to national stockpile and Defense Production Act inventories beyond the maximum objectives shall be canceled or reduced when settlements can be arranged which would be mutually satisfactory to the supplier and the Government and which would not be disruptive to the economy or to projects essential to the national security. Such settlements may take into account anticipated profits and cover adjustments for above-market premiums. The settlement of commitments may be made through the payment of cash or through the application of surplus property or resale of materials. Responsibility with respect to the settlement of commitments in the light of over-all interests of the Government rests with the Administrator of General Services, who shall keep other agencies advised and consult with them to the extent appropriate.

13. *Retention of Defense Production Act inventories.* Within the limits of unfilled maximum stockpile objectives, stockpile-grade materials acquired under the Defense Production Act shall be retained for national stockpile purposes.

14. *Disposals.* The Director of the Office of Emergency Planning will authorize the disposal of excess materials whenever possible under the following conditions: (a) Avoidance of serious disruption of the usual markets of producers, processors and consumers, (b) avoidance of adverse effects on the international interests of the United States, (c) due regard to the protection of the United States against avoidable loss, (d) avoidance of adverse effects upon domestic em-

ployment and labor disputes, and (e) except when materials are channeled to other agencies for their direct use, consultation with the Departments of the Interior, Commerce, State, Agriculture, Defense, Labor, and other governmental agencies concerned, and consultation as appropriate with the industries concerned. If within 30 days after such consultation either the Department of State or the Department of the Interior indicates an objection to the proposed plan which, after discussion, the Director does not support, he shall so notify the President and present the issue to him for decision. To the extent possible disposals should be made in accordance with long-run disposal plans which have been worked out in consultation with the interested departments and which take into account probable trends in supply and price both at home and abroad.

In making such disposals preference shall be given to materials in the DPA inventories.

Disposals of materials that deteriorate, that are likely to become obsolete, that do not meet quality standards, or that do not have stockpile objectives, are to be expedited.

The Administrator of General Services shall be responsible for conducting negotiations for the sale of materials and will consult with and advise the agencies concerned.

15. *Public notice on disposals.* Generally, the sale of excess materials acquired under the Defense Production Act will be made only after appropriate public announcement of the quantity or quantities to be offered in a specified period of time.

16. *Direct Government use.* Government agencies which directly use strategic and critical materials shall fulfill their requirements through the use of materials in Government inventories that are excess to the needs thereof whenever such action is found to be consistent with overall disposal policies and with the best interests of the Government. Except where appropriate in the judgment of the Administrator, General Services Administration, the requirements of section 14, above, with respect to approval by Government departments or agencies and consultation with industries, shall not be applicable to transfers of strategic and critical materials for direct Government use.

17. *Declassification of stockpile data.* The Office of Civil and Defense Mobilization shall declassify stockpile data to the maximum extent feasible when it determines with the concurrence of agencies concerned that the national security would not thereby be jeopardized.

*Defense Mobilization Order V-7  
Issued June 30, 1958  
Revised December 10, 1959  
Amended April 25, 1962*